



AFWERX
AFVENTURES

Weekly Webinar
STTR
September 23, 2021



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ADVENTURES

Updates

Next webinar - Oct 7



AFWERX AFVENTURES

AFVentures Topic

Next Webinar

Intro to AFVentures

7 Oct

Intro to SpaceWerx

14 Oct



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Small Business Technology Transfer (STTR) Program

Small Business Technology Transfer (STTR) (AF21.X-TCSO1)

Three-phase development program tailored specifically to commercialize compelling dual-use technology from across the US research community

Intent:

- Facilitate expansive and meaningful engagement with users and applications throughout the federal marketplace
- Leverage DoD funding to buy-down technology risk and foster commercial success

Note: We award government contracts, not research grants

SBIR vs STTR: What's the Difference?

Similar to SBIR,

Three phase commercialization program codified in statute

Discover (P1) – Prototype (P2) – Transition (P3)

Results in sole-source justification for use by *all US federal agencies*

Same proposal timelines, 3x evaluation criteria, and P1/P2/Supplemental execution schedules

but,

has unique qualities based on its research focus:

Requires one qualifying research partner to perform 30% - 60% of work (e.g. university, non-profit, or FFRDC)

PI may be primarily employed by research entity (e.g. professor) or the small business

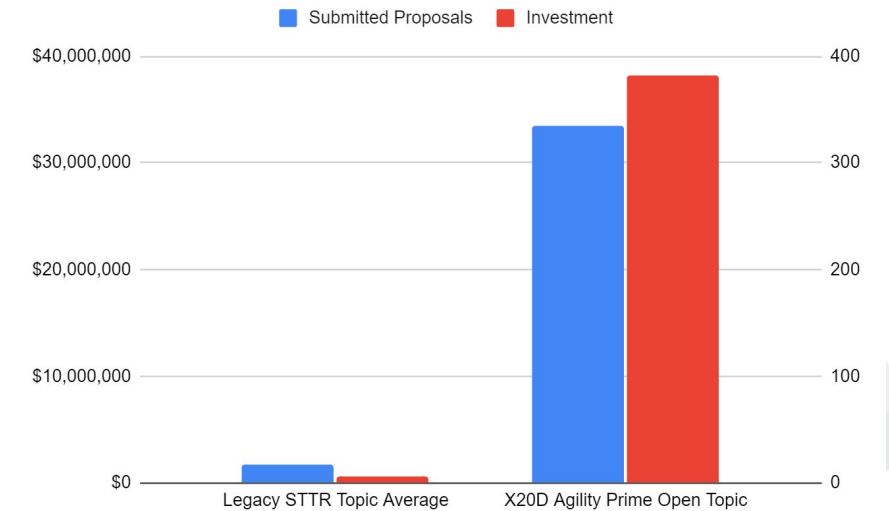
Leverages close ties with both federal R&D AND operational communities

What is a 'Research Institution?

“(cc) Research Institution. One that has a place of business located in the United States, which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor, and is: (1) A non-profit institution as defined in section 4(3) of the Stevenson-Wydler Technology Innovation Act of 1980 (that is, an organization that is owned and operated exclusively for scientific or educational purposes, no part of the net earnings of which inures to the benefit of any private shareholder or individual); or (2) A Federally-funded R/R&D center (FFRDC) as identified by the National Science Foundation (NSF) in accordance with the Federal Acquisition Regulation issued in accordance with section 35(c)(1) of the Office of Federal Procurement Policy Act (or any successor regulation). A non-profit institution can include hospitals and military educational institutions, if they meet the definition above.”

SBA's SBIR/STTR Policy Directive (2019): https://www.sbir.gov/sites/default/files/SBIR-STTR_Policy_Directive_2019.pdf

X20D (Agility Prime) Engagement as a case study



STTR Proposal Structure

Same as SBIR, but with important partnership agreements

Vol 1: Basic Information (SAM, DUNS, CAGE, Abstract, etc)

Vol 2: Technical

Maximum of 25 slides (12 required, 9 required as applicable, the rest are elective)
Work Plan (Non-proprietary)

Vol 3: Cost

System formatted inputs

Vol 4: Commercialization Program

Go to the website listed and simply follow the directions

Vol 5: Supporting Documentation

Additional Cost Info (your preferred format)

***Teaming arrangement with eligible RI**

***IP Agreement with RI (SBA template available)**

Resumes for key personnel

DoD Funding Agreement Certification

Etc

Vol 6: Fraud, Waste, and Abuse Training

**Signed MOUs (with DAF
TPOC) will be required to
proceed to Phase 2**

STTR Proposal Non-Negotiables

“Help me.....help...you”

This solicitation is for Phase 1 only: maximum contract terms of \$50K, 3 months

All eligible offerors **must be qualifying, registered small businesses and propose Phase 1 efforts with a qualifying Research Institution (RI) subcontractor**

≥ 40% to the Small Business

≥ 30% to one Research Institution

30% trade space (Small Business, RI, large company, secondary RI, etc)

Required agreements with RI **must be submitted with your proposal (we’re checking for the presence of these documents, not adjudicating the contents)**

Teaming Arrangement

Allocation of Rights Agreement (ARA)

Complete proposals **must be submitted via the Defense SBIR/STTR Innovation Portal (DSIP) system**

We cannot pre-read or recommend proposals

No email or other non-DSIP submissions will be received

****Must be Research, Development, Test, and Evaluation (RDT&E) activities****

Not services, not procurement

Fraud, Waste, and Abuse training

Proposals without these items simply won’t be evaluated

What's Next?

Phase 1 Proposals

Meet baseline eligibility requirements (incorporate, register, have RI partner)
must follow instructions per solicitation

Evaluation Criteria:

1. The potential for commercial (Government or private sector) application and benefits expected to accrue from commercialization. The SBC's record of commercializing STTR or other research, the existence of Phase II follow-on commitments for the subject research are evidence of commercialization potential.
2. The appropriateness, relevance, and specificity of an identified Defense Need. A complete, signed, and cogent Air Force Customer Memorandum is an indicator of the appropriateness, relevance, and specificity of an identified Defense Need. Adequacy of the proposed effort and its relationship to fulfilling the identified Defense Need.
3. The soundness, technical merit, and innovation of the proposed approach and its incremental progress toward fulfilling the identified Defense need and the qualifications of the proposed Principal Investigators/Project Managers, supporting staff, and consultants to execute against the proposed approach.

Other Topics

- What is RDT&E
- COTS & NDIs
- Modification vs Continuous Technology Refreshment
- Historical Lessons Learned
- More Examples
- Possible DQ and Proposal Suggestions



What is R/R&D?

1. A **systematic study** directed toward **greater knowledge or understanding of the subject studied**
2. A **systematic study** directed specifically toward **applying knowledge and innovation to meet a recognized but unmet need**
3. A **systematic application of knowledge and innovation** toward the production of useful materials, devices, and systems or methods, **including design, development, and improvement of prototypes and new processes** to meet specific requirements
Includes **ALL** fields (physical sciences, engineering, ect)

COTS & NDIs

Items purchased directly from a commercial source that can be utilized **without alteration through design and development, or without modification**, are Commercial Off-the-Shelf (COTS) or Non-Developmental Items (NDI)

Examples:

Ready-to-use products

Training Services

Software licenses for ready-to-use software (including Software as a Service (SaaS))

COTS & NDIs

COTS and NDIs *by themselves* are not suitable for SBIR/STTR funding

Example: A company is proposing to sell the Air Force an innovative, new gaming chair to reduce back and neck strain

****HOWEVER****

If (A) an end item requires design and development in order to accept the COTS or NDI
OR

if (B) a COTS or NDI is required for RDT&E test purposes, funding for design and development could be funded by SBIR/STTR funds.

Example A: A company has a COTS product that increases antenna GAIN 10-fold, but the DAF system must be designed to accept the product.

Example B: A COTS device is required to develop the proposed solution.

COTS & NDIs

Modified COTS or Modified NDI: Commercially available items that **must be modified** to satisfy user requirements. The first article, modification of the first article, and first article testing could be funded by SBIR/STTR. Follow-on purchases will **NOT** be funded by SBIR/STTR.

Example: A COTS C-sUAS device will be modified through the proposed SBIR effort to securely interface with a Force Protection platform. The modification work can be funded by SBIR/STTR. The follow-on procurement of the modified devices cannot be funded by SBIR/STTR.

The quantity of modified first articles bought with SBIR/STTR funds will **NOT** exceed quantity needed to conduct RDT&E acceptance tests.

Example: A proposed SBIR effort adapts a wireless device for DAF use, and 5 devices are needed for deployment & testing. SBIR funds CAN cover the needed 5 devices. SBIR funds cannot cover devices 6-10 for deployment to a second site.

Modification vs Continuous Technology Refreshment

Modification - technology refreshment that significantly changes the performance envelope of the end item. If a commercially-available item is modified and requires testing prior to approval for service use or inventory, it may be funded by SBIR/STTR

EXAMPLE: An AI/ML language detection software is modified to read SBIR proposals and determine if all qualification standards are met.

Continuous Technology Refreshment – the intentional, incremental insertion of newer technology to improve reliability and maintainability, reduce cost, and/or add minor performance enhancement, typically in conjunction with depot or field level maintenance.

This is NOT funded by SBIR/STTR

EXAMPLE: A company with night-vision goggles used by SOCOM is applying for a SBIR to insert the next-generation comfort padding they have developed.

Historical Lessons Learned

- **T&E Authority allows for SBIR/STTR funds to be used for DT&E**
- **DevSecOps requires “deliverables” to be amenable to the utilization of RDT&E**
- **Licenses and other ancillary costs must be commensurate with proposed R&D activity (but this can be the “jet fuel” to RDT&E)**
 - Non-traditional companies often lump R&D costs under licensing from a cost-proposal standpoint, making R&D determinations difficult
 - Training is not considered R&D, but can be included as part of overall ancillary costs on a limited basis
- ****SBIR/STTR PHASE II** Milestone reviews are critical to the determination of R&D, as they articulate the full scope of work. Companies need to clearly articulate R&D activity to be done**

More Examples

Approved STTR/SBIR Proposals:

T&E for COTS product IOT determine adaptations needed for weapons system integration

“(8) Agencies may issue Phase II awards for testing and evaluation of products, services, or technologies for use in technical or weapons systems.”

[2019 SBIR/STTR Policy Directive \(2019\)](#), section 4(b)(8) on p.75

Not Approved STTR/SBIR Proposals:

Known, minor customizations needed for an existing COTS solution in order to incorporate for government use

Preponderance of Phase II funds used for purchasing equipment / services

“I know the AF needs red fire fighter boots so I will use my phase II to make ours red”

Possible RDT&E Disqualification?

If a proposal is determined to not meet RDT&E qualification for the SBIR/STTR program, it will be disqualified and the company will receive a Not-Selectable status.

Suggestions:

- Carefully review the content of these slides to determine if your solution meets the RDT&E requirements
- Ensure your proposal is explicit in explaining the RDT&E work you will be accomplishing
- Ensure your proposal does not lump R&D costs under licensing to provide clarity to the actual costs



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Questions?

Please type your questions in the Q&A section